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ABSTRACT

Interviews were conducted with 27 teachers working in open space schools in Australia. The selection of interviewees was arranged to find those with both critical feelings of the deprivation of their traditional roles and the independence of the self-contained classroom and with enthusiasm for what others view as a major component of educational progress. Those who felt uncomfortable with the new schools (some to the point of requesting transfer to traditional schools) cited among their problems a lack of discipline, an "anything goes" attitude by the children, excessive noise, the difficulty of enforcing their own standards when not supported by other teachers, and dislike of practical aspects of the physical environment. Those who liked the schools cited (1) the opportunity to cooperate as a staff, (2) the enhancement of possibilities of learning successful teaching strategies from other teachers, (3) a feeling of increased independence and freedom to experiment, and (4) the validity of having teachers focus on their special abilities rather than try to cover all things for all children. It was inferred on the basis of this interview that the open space school is not necessarily geared to every teacher's personality and abilities, but that it is a positive innovation for many. (CD)

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THE AUSTRALIAN OPEN AREA SCHOOLS PROJECT

ED118530

THROUGH TEACHERS' EYES: TEACHING IN AN OPEN SPACE PRIMARY SCHOOL

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

TECHNICAL REPORT No. 1

2

THROUGH TEACHERS' EYES: TEACHING IN AN OPEN SPACE PRIMARY SCHOOLS

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AUSTRALIAN OPEN AREA SCHOOLS PROJECT

Technical Report No.1

THROUGH TEACHERS' EYES: TEACHING IN AN OPEN SPACE PRIMARY SCHOOL

G.S. Fitzpatrick and M.J. Angus
Research Branch, Education Department
of Western Australia

1974

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FOREWORD

In 1968, the Education Department of Western Australia built its first prototype of an open space primary school. By 1974 more than 100 schools had open space teaching units and one in four primary teachers was working in this type of school environment. In view of these developments, which were being paralleled in other Australian school systems, requests for an evaluation of the new school design became widespread.

This report describes an investigation which is associated with a larger national study, the Australian Open Area Schools Project, supported by the Australian Advisory Committee for Research and Development in Education. It is assaying a different type of evidence from that of the national project which is primarily a regression analysis of the effects of school practices upon student behaviour. It is hoped that this smaller study will provide valuable supplementary evidence.

At this point a tribute should be paid to the teachers who took part in the study, particularly those teachers who expressed negative attitudes towards open area schools. It is to their credit, and the credit of the profession, that the major sources of their discontent were not the trivia, such as minor irritations with working conditions, that are often popularly associated with dissatisfaction. That they were prepared to speak with such frankness when negative attitudes to a Departmentally sponsored innovation could be quite wrongly mistaken for an admission of professional incompetence. It is too easy to link an unwillingness to change and adapt to a new teaching situation with some personality trait, such as stubbornness or inflexibility rather

than with a professional or ideological commitment to the *status quo* or some philosophical variant other than that currently receiving the endorsement of education authorities. The history of education is marked with teaching-style fads. Open space school design has yet to demonstrate that it will make a more permanent contribution to Australian teaching practices than say the Dalton or Winnetka plans of earlier decades.

A.N. Stewart
PROJECT DIRECTOR

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PURPOSE OF THE STUDY

In view of the plethora of articles on open plan or open space schools* emanating from the United States and the United Kingdom over the past few years, it would be easy to stand back and adopt the judgment of these co-commentators with little question. But open space schools do not exist in a cultural vacuum. The attitudes of teachers, students, parents and community members which affect the school's operation may differ from country to country. What may have been the experience of American or British schools need not prove to be the experience of Australian schools. Although this observation may appear a truism, it is often forgotten by eager advocates or critics of open education when citing evidence gathered in other communities and cultures.

This report was prepared to provide insight into the manner in which teachers in Western Australia have responded to open plan or open space school environments. The primary intention is not to make a case for or against open space or conventional-type school designs but rather to document and put in context the variety of insights and convictions of a sample of professional educators teaching in open space environment.

It is important at the outset to note that this report does *NOT* pretend to provide a representative picture of teacher reaction to the new style of primary schools. The use of interviews to gather the information necessarily limits the number of subjects, and during the compilation of the report no attempt has been made to represent the "average" teacher response. The comments provide an overview of opinion from a select sample of teachers in open area primary schools.

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* For the purposes of this report, the terms *open space school*, *open area school*, *open plan school* and *cluster school* are used synonymously.

They have the advantage of being collected under unpressured conditions where, with anonymity preserved and the interviewer posing no threat to their professional status the interviewees were able to give their frank impressions in a semi-standardised interview situation.

The data are derived from intensive interviews with 27 teachers, 11 of whom were satisfied and 16 dissatisfied with their experience in open space schools. These interviews ranged in duration from 20 to more than 200 minutes. Characteristics of the sample of teachers interviewed are shown in Appendix 1. Appendix 2 describes how the teachers were selected and the procedures adopted for the interviews. The interview schedule itself is shown in Appendix 3.

The value of these data is two-fold. In the first place they have provided an in depth description of the feelings of a group of teachers to open area schools and thereby heightened an understanding of the necessary parameters that govern the operation of a successful open area school. Compatibility among teachers, leadership style and aspects of pre-service and in-service training appear to be key factors influencing its efficient operation.

Secondly, they have revealed that for some teachers the open space school represents an ideal educational environment and is an important catalyst and facilitator for their teaching. For a number of their colleagues, however, the experience of teaching in an open space school has been professionally and personally dissatisfying. This report attempts to uncover some of the reasons.

OPEN EDUCATION AND OPEN SPACE

A Distinction

One may use the term 'open space schools' but the term 'open space education' is a misnomer. 'Open space' is a design concept. Schools that are predominantly open space are schools which incorporate that particular architectural feature. The term of itself does not necessarily designate any particular educational purpose or programme.

It is true that the trend away from isolating a teacher and a class of children in self contained rooms and moving toward a more varied, shared physical environment has been motivated by a variety of educational reasons associated with modifying conventional approaches to instruction. However it is difficult to pinpoint any single factor which can account for the change in architectural style.*

What is clear is that the development of open space school design has occurred contemporaneously with a growing appreciation among numbers of teachers of the need for a less formal learning environment, a trend which is strongly sympathetic to the ideals of the well publicised philosophy of open education.

Thus open education, an amalgam of informal educational practices, may or may not characterise instruction in open space schools, or to rephrase the statement, open space schools may house a variety of educational practices including open education programmes, though it is likely that certain facets of the open space facilitate the conduct of informal teaching programmes.

What is open education? What is the rationale behind open space schools? The answers to these separate questions are elusive and subject to considerable divergence of opinion. Within the western

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* Appendix 4. details architectural developments in Western Australian primary schools since 1968.

Australian school system there is certainly no unanimity of definition among teachers, as the following comments bear witness; open education and open space concepts are frequently confused:

> Open education to me, means freedom for an individual teacher to teach in whatever way he feels is best for himself and the pupils whom he is instructing. It means that I should be free to act as an individual. In no way does open education have anything or in no way does it have a great deal to do with the type of structure one finds himself working in.
>
> I'd say it concerns itself with cross-setting, cross-grading*, group teaching, specialised teaching, and I was under the impression that's why these schools were built to this particular constructional design.
>
> It means classrooms which are open; where you are working in the presence of another teacher, and where there are twice as many children as you were used to having.
>
> Open education to me means using all the open spaces.
>
> I think basically open education means a freedom to experiment with the curriculum and allow for your own personal ideas to be carried into the curriculum.
>
> I must confess I haven't actually heard the term 'open education'. I will have to have quite a think about this.
>
> It implies cross setting with children moving from perhaps

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* Cross-Grading:- In this procedure pupils throughout all grades or perhaps through a certain range of grades are tested and ranked in order of achievement in a particular subject or learning activity. They are then re-grouped into classes so that pupils with similar achievements work together in that subject.
Cross-Setting:- In this procedure students from one grade level are tested and ranked in order of achievement. They are then re-grouped into classes so that pupils with similar achievements work together.
These administrative techniques are usually associated with considerable movement of children and teachers about the school premises. The open space school, with its reduced number of physical boundaries, can facilitate this movement.

> grade to grade depending on the unit they are on. Teachers teach their particular thing rather than all teachers teaching every subject; we might have one who is very good at phys.ed. so she can take a larger group for phys.ed., another teacher whose forte is social studies and therefore she takes the social studies aspect.
>
> Open education is a child-centred education where you are meeting individual children's needs. To me it is activity learning in the junior grades rather than one-teacher-teaching-one-class and not taking into account their individual differences.

These interpretations of open education tend to become translated into action by conducting various cross grading and cross setting programmes, or by providing activity periods in which children are allowed options with regard to what they learn and the manner in which they engage in the activity. Cross-setting and cross-grading practices especially characterise instruction in the majority of open space schools in Western Australia. The excerpt below provides a description of cross-grading in one particular school.

> Cross-grading is done on a block basis. The children are free to move to whichever level they need to be working at. In most classrooms, teachers give permission to use the *resource centre* without their supervision as long as there is another teacher there to supervise. The *quiet area* is used quite frequently by groups while other children are working in the main *teaching area* and other groups still are working outside on the *lawn*. This means you can have four or even five groups working in different parts of the school making it perhaps a harder job for the teacher for supervision. But it leads to a child-centred approach to teaching and learning, in which children seem to be more interested because they can work away from people they don't want to work with, and perhaps with people they do want to work with.

Freedom

A recurring theme in the interviewees' discussions of open

education was the freedom of teachers to modify instruction as they saw fit, and the freedom that is given to children to play a more active part in determining the nature of the learning experience.

This aspect is elaborated by two teachers in the extended comments below.

> Open education means to me that we are opening a field of education so that the child will become able to be free through his own initiative and through training in the early stages.
>
> It seems to be very essential in the modern world today that before people take up what they are going to do in after life they know at an early stage what they want to do, and before anybody can be free to choose and to want to do these things, they have to be able to have the basis of knowledge of these things at their finger-tips. I feel that if in the open schools we can teach them to live and to consider other people and at the same time be acquiring a set of basic knowledge which they are able to use in later life then I think that we have done something good for them. I don't think that in open schools it means that the children should be just left 'willy-nilly' to do as they like all day, or that they should do what they want and become little rebels.

> Open education is the freedom to move out of a classroom, to go down the street, to go down the park, to go for a nature walk. If you're going to study birds, you don't sit in a room and look at a picture. You go out and find one in a tree!
>
> Openness of planning is a freedom also. Instead of putting it on a sheet of programmed paper supplied by the Department, you grab a sheet of paper or a sheet of cardboard and put it on the wall or hang it from the roof and you're sharing. It's not your idea, it's the kids' ideas, the other teachers' ideas, it's compatible teachers' ideas, headmasters' ideas, and all these things - this is the openness - it's a great big pot where everything gets mixed up. Then from this you extract the things you want to do, the things that you feel are important for the kids and this is the nitty-gritty. This is what we do and it remains to be seen of course, what happens at the end of the year, how it has worked, but it's a fabulous experience.

It is almost inevitable that in any discussion of freedom for the child, the real issues under consideration are less abstract topics of discipline and control. For open educators, freedom is valued because it is believed to be essential for the learning of independent, responsible behaviour. The problem is to recognise the difference between responsible, independent behaviour and unruliness and indiscipline. Nevertheless, many open teachers believe that once genuine, warm relationships are established between teacher and children then they can skilfully orchestrate the pattern of classroom interaction and influence affective learning. They point out that the encouragement of independent behaviour does not necessarily require the continued withdrawal of the teacher from the arena of decision making.

Supporting this point of view one interviewee comments:

> I think the most beneficial aspect of this type of school is that it teaches children to be independent. They don't need the teacher to learn. They don't have to have the teacher in the classroom. They have got all the equipment there; they have got the space there; and they have got the incentive there to want to learn themselves without having to be supervised. Take for instance my class of 3B. I couldn't get up and teach them tables if I wanted to because they don't like being taught. They haven't got that sort of attitude and possibly because they are not particularly the bright type of child but they learn their tables quite well by themselves in groups on the floor or by writing their own tables on the blackboard. I am sure I couldn't stand up and say, "Right! Say your tables over and over again." They wouldn't learn a thing.
>
> Another aspect I think is that you can't be either a directive teacher or indirective teacher, especially in junior primary. There has to be a little of both. The child is still immature and you still have to train him socially. Although you are basically a guide you still have to be the authority when children are that young. I think they need a mixture of both methods and gradually as the years go by, the more indirective.

However being able to successfully manipulate classroom situations by alternating between directive and indirective teaching styles as the situation demands is a high level skill. It would seem that some teachers too readily identify noise as a symptom of indiscipline and a threat to their authority as a teacher. In the open space school this problem can be accentuated by the involvement with children of other teachers who have developed differing expectations of what can be considered minimal behaviour standards. This matter is well capsulated in the comment below.

> I have my home class for 15 minutes in the morning. Then we cross-set for maths. We cross-set again for spelling. We cross-set again for reading and my home class comes back to me at half past eleven. I've found that I have lost contact with the ones who don't also remain with me for those three periods. They come back and they are very restless. They are disinclined to work and they can't cope with the rest of the subjects that I am supposed to teach to my home class, anymore than they can cope with the school.
>
> Let me quote an example: Let's say my bottom kid who doesn't come to me for any of the school subjects, but is in my home group, is still expected to do creative writing, social studies and formal English at the level of my top child. I still insist on a certain standard of neatness from children although I do realise that this has gone by the board to a certain extent. And, while I'm insisting on a certain standard of course other teachers, to whom some of my children go, are not so fussy. I feel the children resent my insistence on neatness, good handwriting, etcetera, when they come back to me. This would apply to discipline also. I find that some of the younger teachers, and some of the older teachers too, of course, are inclined to be very "matey" with the children. Personally I find that this doesn't work with me because I would, I feel, lose control if I got too familiar with them. But of course they come back to me after with different attitudes from these other teachers that they go to.

This conflict of expectations between different teachers and different children appears to be an important source of teacher dissatisfaction. Unless there is agreement among staff members on

this key issue then the resulting incompatibility can provoke large measures of stress among staff members. Some staff members felt a serious concern regarding this matter.

> I honestly feel that children are demanding in this school from us some form of discipline and they are not getting it. Consequently their behaviour is going to get worse until somebody is going to stop them. I have attempted to stop them myself but I am one lone woman at this stage. There is another fellow who makes the attempt to stop them and of course he doesn't hear the language either. I don't hear it any more, but I have heard it and I think that we are more or less destroying these children by allowing them to do as they like. They are appealing, probably not consciously, for us to help them and we are not helping them.

> Well! I feel that there is quite a deal less expected of a teacher in an open area school. The standards which I have been led to expect to believe that you can get from children, and you get them by coaching them along, and cajoling them along, are no longer expected. Anything is acceptable provided the children wish to do it. If they don't wish to do it why should they be made to do it? That is their attitude.

> When I came to this open area school I was shocked at first to find that there was going to be no concertina doors. Nowhere could I get any quiet at any time. I also found that there was very, very little discipline. In fact it wasn't even organised chaos - it was just chaos. You don't walk through a door first here; you step back and see that there are no children coming, because if you walk through the door first, you will get knocked down. And, it has happened to me. I have been actually knocked down walking through a doorway.

Somehow or other the clash of value orientations must be resolved. In some cases the teacher must withdraw to a self-contained classroom situation. This solution is not always satisfactory. There is a danger that factionalism will permeate the school system while a number of teachers feel that the philosophy of the school is directed against them.

The fear of lack of control is one that has consistently haunted

teachers, not only in open space schools, and inhibited the spontaneous relationships with children that are recommended so highly by open educationists. Yet to merely *point out* to teachers that control need not be a problem, or that intrinsically motivated children do not present control problems, are glib explanations quite divorced from the reality of that particular teacher's classroom. The classroom is a complex social system; the teacher's disposition is one consideration, but so are the dispositions of her colleagues, the children and their parents.

COMPATIBILITY OF TEACHERS WORKING IN OPEN-SPACE SCHOOLS

Co-operative Planning

As Brunetti et al. (1972, p.86) note, school design exerts an influence upon teaching style and organisation. The open space environment is no exception.

> Potentially, the open space school can have a profound effect upon the teacher's work environment. Teachers are no longer organisationally isolated but must co-operatively plan the activities of several groups of students. The task of planning becomes more complex, not only because of the number of students the team is responsible for, but also because teams group and re-group students throughout the day, and develop complex scheduling plans. Co-operative planning requires new decision-making and communication skills for which teachers have no special training. While open space has provided a functional physical environment for a co-operative task structure such as team teaching it also reduces the physical isolation of the teacher; increased visual and acoustical contact increases the need to co-ordinate and schedule activities so as to minimise potential conflict within the team and to control student noise and activity levels so that disruptions are minimal.

The comments by Brunetti and his colleagues appear to have a particular relevance to open space schools in Western Australia. Teachers here have practised alone in self-contained classrooms for many years. Shared responsibility for instruction, curricula, learning, timetabling and other matters of daily routine are relatively recent innovations. There are teachers who, for a variety of reasons, have resisted team-teaching as an innovation and preferred to maintain as far as possible their autonomy in the open space school.

Their reasons for so doing are often complex; for some teachers it seems easier or more appropriate to continue tried and proven methods

of instruction; for others sharing responsibility for a class with other colleagues is seen as a possible diminution of the quality of instruction; and there are teachers who because of personal qualities of independence and self-reliance find working with others an irksome experience. As long as these teachers are likely to remain in the education system and as long as they are likely to find themselves in a school which encourages co-operative teaching then the issue of compatibility is of considerable importance.

The quotations that follow were the responses by teachers working in open area schools. They point out the importance of compatibility and the inherent frustrations for teachers in open space schools located adjacent to colleagues with different attachments to the notion of co-operative teaching.

One, an over-sixty veteran, had this to say:

> Open education means to me to be part of a teaching team, to see the skills of other teachers, to take part in this co-operative plan which we have at our school and to be a member of a team which is working for the good of all the children in the school. It is better for the child because the child gets the skills of six teachers instead of the skills of one. Also, one does not feel entirely responsible for one's own class because the other teachers share in many of the subjects and it is the team's responsibility, not your own.

Another veteran teacher with over 40 years continuous experience commends co-operative teaching:

> In a small school with the staff so close together you find marvellous co-operation between teachers. We all know each other very well and not only through the association in the school. The fact is that we discuss our problems and we talk over all the things that we want to do together, before we do them. Any changes, we discuss. Also the fact that at some time in every day, we teach every child in the school. They

> are all your children and you know them all and they all know you and they all treat you as their very best friend. So, I think that those are the most important things in this type of school; the fact that you can really work as a team and that the team spirit which is becoming inculcated into the child helps make it so very, very ideal a place in which to work.

These two comments tend to belie the widely accepted view that acceptance to changes in teaching practices will occur more readily with younger teachers.

The interviewee quoted below has revealed some of the empathy displayed by her team in a six-teacher open area unit:

> Well! The things that I have liked most are that we're not locked away in our separate area, we can see other teachers, talk to them, and discuss situations that have happened. We're more professional in our outlook. If we look up and see something that we like in another area, we feel far freer to talk about it with that teacher and to borrow from her and to have her borrow ideas from us. We are less locked away in our own areas too. I think we have a far more balanced outlook on life. Instead of the whole world being me and my children, it is me as part of the school and related to other adults.

Another teacher commented:

> I think the thing that I like most is working closely with other staff members, especially coming to grips with their ideas and I feel I've learnt a lot from them, an awful lot more than I did when I was in a classroom by myself.

Some Problems with Co-operative Planning

A number of interviewees were less enthusiastic about their experiences with co-operative teaching. As the following comments indicate, innovating is an energy-consuming experience.

I would like to see this school much more open and using the building. It is wasted at the moment, the whole thing, but we can't do it at the moment because we just haven't got enough co-operation between us to do it. That is all it boils down to. If I was going into a cluster-type school next year I would have to, for my own personal satisfaction, know the teachers who were going into it, get together with them for pre-planning of overall programmes, so that we could get together on this business of working together and get the co-operation going before school started. I think that is where we fell through this year. Everybody was just sort of shoved in and we didn't co-operate. The time wasn't taken to stop and get together and sort things out, and everybody sort of started in his own way and got into his own little rut and then we just couldn't pull out of it. So you have to have time for pre-planning and working things out properly before you get into it.

Other teachers raised a number of problems that they faced during their experiences with co-operative teaching in open area schools.

It depends on the individuals involved and with different individuals. Down here the whole situation could have been completely different even this year, but it is just that some teachers are traditional teachers and they refuse to co-operate. They like to have their own little class and they don't like anybody else interfering and this is the sort of thing we have got going on here.

I found it very embarrassing in the first place. I have never liked teaching in front of anyone. I overcame that because I have a very nice teacher with whom I am working. We work very well together. I think it would be pretty difficult if you couldn't get on with the teacher who works with you especially if she wasn't prepared to be co-operative.

...you are expressing yourself and then the other teacher looks up at you and you feel quite embarrassed, so you hide behind the section of the room where you can't be seen by your neighbouring teacher.

I've disliked the lack of privacy. I've disliked hearing what is going on next door. I've hated the idea that my children might be disturbing the person next door. I think because I'm probably not a very co-operative type of person

> I don't like the idea of team-teaching. We have done very little of this but it is something that I know is expected of you in a cluster school. I feel that given team-teaching you're very much tied to one timetable. If you decide to go over time you mess everybody up. You are also very much tied to the personalities of the people you are working with and I don't believe this is something that is going to work. I think if you happen to get a couple of people who get on well together, you will be lucky but it is a chance in a hundred or even more possibly, that you will. You will always have somebody who doesn't work that well with the others.
>
> If you happen to be in an area with a weak teacher with poor discipline you've got all the noise and bad behaviour from those children. I know that you are expected to make yourself responsible for every child but you can't go around disciplining children when another teacher is in charge of them. You can't go and say that's not the way to behave and things like this; that's undermining that teacher's authority. If you've taught for a few years and you've managed to get those things under control for yourself it's very irritating to find you're still putting up with it because you're near somebody who isn't able to control his class.

An Over-simplified View?

At this point in time co-operative teaching is an innovative teaching practice. The current literature is overwhelmingly in support of it. Some of these commentaries are heavily value laden. For example, Freeman (1969, p.91) writes of team-teaching:

> All three teachers agree that they have found the work stimulating but very demanding. They agree that there is no place for the lazy or indifferent teacher in team teaching. They stress the need which they have found for tolerance and unity of purpose.

Blitz (1973, p.145) proposes that personality factors are key determinants of successful co-operative teaching. She writes:

> Another important factor to consider in beginning the open

> classroom is your personality. If you are a person who is basically in touch with her feelings, who enjoys life and is easy-going in most situations, then you probably can move easily into the open classroom. If you are a controlled person who tends to suppress feelings, you may have some initial difficulty in the open classroom situation....The great lesson we have learned from England and from pioneers in open classroom techniques in this country (U.S.A.) is that the teachers who are highly motivated to change present learning conditions are the ones who can utilize open classroom techniques most easily and most successfully.

Writers such as these may give the impression that teachers who prefer to operate in a self-contained classroom are either lazy, social misfits or educationally ultra conservative. Such a judgment as this has not been supported by this study. There exists a number of teachers resistant to the idea of working as a member of a team of colleagues, and an important reason behind this disposition is a professional preference based upon a personal analysis of the needs of children and the teachers' own competencies. In an open space primary school it would be far easier for most teachers to drift into half-hearted compliance with a co-operative approach than to stand apart. The pressure to comply with colleagues would encourage this drift.

This is not to deny that co-operative teaching can be a worthwhile strategy. Quite the contrary; the preceding commentaries of numbers of teachers must surely make a case on its behalf. However the evidence also suggests that co-operative teaching may not be the instructional avenue along which every teacher and child should be channeled automatically.

THE PHYSICAL ENVIRONMENT

Some Criticisms: Temperature Control and Noise

Campbell (1973) has pointed out that Australian teachers tend to be quick to find fault. Most teachers, even those with highly favourable general impressions of open space schools, had little hesitation in pointing out defects in the design and appearance of the school. However, for those who felt out of place in the open school, its architecture was a very tangible target of criticism. Ventilation and temperature control were aspects which especially drew criticism.

> The ventilation in this school is poor. It would make a good hot house for orchids in the summer time. There is no through-ventilation, the open scuttles which are in each room to provide the ventilation and the exit, for example, on the side opposite the class walls, don't serve the purpose. The continuation of the low ceiling throughout the whole building means that air has to move a great deal of distance before it escapes and the need for some form of forced ventilation is very evident. These buildings have tinted glass walls which are hotter than normal glass and the entrance areas to some of these classrooms, in the afternoons, is so hot that it is unbearable.

A colleague in another school also drew attention to temperature problems:

> In some areas of this school where the windows face the direction of the sun, the temperature inside the rooms in summer time is absolutely stifling. I taught in one area where during the summer I could not eat my lunch. It was definitely having a detrimental effect on my health.

Comments on noise were also a feature of accounts by some teachers. The impact of this disturbance upon teaching strategies

is seen in the following excerpts:

> I did have an experience when the teacher I shared the area with was away and we had a relief teacher. The relief teacher had a particularly loud voice and I found it very hard to talk to my own class and there was quite a bit of noise and it was very difficult for the children to hear me.

Another teacher noted:

> The noise level at many times becomes intolerable to me and also to the children in my class. Many of them who sit towards the far end of the room, where they are in close contact with the next class, will put their hands over their ears. They often say to me Mrs.... I can't hear you. I can't think of the answer - there is too much noise.

The net effect of this experience was not merely a minor irritation.

> My health will not take the constant noise level to which it has been subjected. It has not been a sudden deterioration; I have battled for three months with the noise level. I have been taking tranquillisers for a month and never ever before in my life have I ever had to take any type of tranquillising drug at all.

Other teachers commented upon a different effect of unwarranted noise.

> I think I could pick out one thing in general and that was twelve months' experience with one particular class that I found very difficult to handle. I wasn't very compatible with the teacher who was teaching opposite, and it made it very difficult, especially with the noise level.

Flexibility

In making some overall evaluative comment on the buildings *per se*, it is appropriate to consider the claims that are made for it by designers. 'A more flexible design' is one of the principal plaudits written on behalf of the open space school.

The open education literature is littered with cliches and not very useful jargon. 'Flexible space' is one such term which has become adopted by proponents of open space schools. Unfortunately, in the context of school design, it is not even a new term. Sargent (1964 p.217) noting the increasing popularity of the team since World War II, accurately observes:

> The educator member of architect-educator teams felt unclear about the directness of the secondary school program and about the kinds of spaces that would be needed. But he felt certain of one thing - changes would be made. Therefore he seized upon the word 'flexibility' and told the architect to design a flexible school. But 'flexibility' is an elusive word, and many architects complained that the educators had merely shifted educational problems to them - unsolved.

Frequently, it is assumed that by removing walls between classrooms the architect has provided automatically a learning environment with an increased number of alternatives for teaching and learning. But the human element can easily be forgotten. The flexibility of open space school buildings really pertains to the manner in which the building is utilised by teacher, children and community.

> I don't necessarily teach the same subject at the same time every day, say if for instance the children come in at 9 o'clock and want to do music then we do music and we do spelling later on in the day. Of course you still have to be considerate of the teacher at the other end of your room but one of the best aspects of this type of school is that you don't have to teach in your classroom - there are always other areas to move to.

For some teachers, under certain learning conditions, open space schools may provide children with an increased option of learning approaches. For other teachers, however, the reverse is true. Consider the comments below.

> There are several things which I dislike about this type of school. Firstly, and most importantly, the fact that one can not close off a teaching area when one wishes, except in some areas of the school. I feel that it is essential that if I want to be closed off from an adjacent area, then this is possible. I find that it is essential in this school to very closely timetable the programme and work in co-operation with the adjacent teachers, so that if I want a noisy type of lesson, well then, the teacher next to me has to have a noisy type of lesson. If I want a quiet lesson, then I either have to move out of the room or check with other teachers to see that they are having a so-called quiet lesson at the same time. Now this means that rigid timetabling is essential. Flexibility is just not evident and wanting flexibility, wanting a change at numerous times, in a type of lesson - in a noisy lesson you might suddenly want quietness - I find that I am continuously being restricted in my teaching.
>
> I feel that it must be difficult working with the areas open when you are giving a lesson which requires quite a bit of noise and the class next door is trying to work quietly, therefore they are distracted by your noise. I feel that you would ideally have to be doing the same thing at the same time and working together most of the time for this situation to work.
>
> Even in the rooms of this school, where one can completely partition oneself off, with the use of concertina doors, the noise travels right through. I could be having a social studies lesson where the pupils are involved in activity work and the room next door is doing likewise, part way through my lesson I wish to stop my group and have several lots of children tell the class what they have been learning about, which requires the rest of the class to listen. Of course, they cannot hear anything, because the class next door is still involved in activity work where they are speaking quietly to one another. But the noise is such that it interrupts me hearing my children in my class. Now this is happening in every lesson right through the day. It can happen at any time. This is a serious problem and one learns to live with it, but certainly teaching cannot be effectively done under these circumstances.

Hence, the effect of noise upon the teaching process is three-fold; it can be wearing upon a teacher's nerves, and indirectly affect the quality of instruction. More directly, it can reduce the number of instructional options that a teacher feels disposed to allow, and, it simply interferes with the quality of classroom communication. These effects are of substantial importance.

School designers are now beginning to realise that the provision of large open shells, uncluttered with immobile furniture and unsub-divided by fixed walls, will not necessarily facilitate a diversity of teaching practices. For numbers of teachers, visual and aural exposure to their colleagues is a restricting experience. Even providing specialised semi-self-contained teaching areas need not provide a teacher with more immediate teaching options; a school timetabling (or cross-grading or cross-setting) programme devised by colleagues or the principal may leave a teacher only very limited options about how he may utilise his teaching environment. The lesson is clear; unless teachers are provided with an understanding of how the open space environment can be exploited and then be demonstrated the important options of how to use the space, only minor gains can be expected by replacing cellular arrangements with open space.

Criticism in Context

It is not proposed in this paper to recount all suggestions of teachers for modifying open space schools. Even teachers generally well disposed towards open space schools were able to suggest improvements; more pin-up boards, larger teaching spaces, locks on doors, less window space, a more sensible location of toilets, extra cupboard space.

The list is extensive*. However, some interviewees did enthuse without qualification over the school environment:

> The first thing that I like is the way the children are so happy in this type of school. Comments have come from parents saying this is the first year he has been really glad to come to school. The looks on their faces as they are learning I find most rewarding, and, their own achievements, when they come to you at 12 o'clock and say I have done this and this and this.
>
> This building is so beautiful and so large that I feel that it has allowed us to think of a development from kindergarten, where children have more freedom to develop in all ways: to be creative, to learn self-control and self-discipline. I am sure, I am convinced, that the lovely environment the children are in here has influenced them to give of their best in work, attitude, and manners.

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* Fitzpatrick, G.S. and Zani, T.L. *Australian Open Area Schools Project, Technical Report No.2: Teachers' Comments on Open Area and Conventional School Design* (Perth, 1974).

LEADERSHIP IN THE OPEN AREA SCHOOL

Innovation

Barth (1971, p.97), has described the reactions of some principals and administrators in this way:

> Some educators are disposed to search for the new, the different, the flashy, the radical, or the revolutionary. Once an idea or practice, such as "team-teaching", "non-grading", and (more recently) "differentiated staffing" and "performance-contracting", has been so labelled by the establishment, many teachers and administrators are quick to adopt it.

Band-wagoning is one response to the open education idea. Equally unsatisfactory is the ultra caution or close-mindedness with which new ideas are received. The *status quo* is too comfortable a position for numbers of teachers and principals. It is a relatively easy matter to convince oneself that the existing forms of school organisation and teaching approaches are the most appropriate. The need to innovate was recognized in the Western Australian school system long before the appearance of open area school design and its associated collection of teaching methods. In 1936 the Western Australian Director of Education recommended (Education Department of Western Australia, p.2) :

> Teachers will consider themselves free to make any alteration or rearrangement of work they think desirable, and inspectors will accept any reasonable scheme that appears to meet the needs of children of a particular type or of a particular locality.

Silberman (1970, p.320), has raised the administrator's twin

problems of freedom and fear, when he quoted Aikin as having said:

> My teachers and I do not know what to do with this freedom. It challenges and frightens us. I fear that we have come to love our chains.

Participative Leadership

Principals have reacted in their own ways to meet the challenge of open education.

The effect of a supportive or participative leadership style is well described by two young teachers who worked as a team in an open area primary school. They felt that:

> ...a greater sense of freedom in this particular situation of ours has been encouraged through the principal. The freedom to experiment, develop our ideas and make a theoretical situation a practical one to fit our own personal ideas - this has been developed through the personal contact with the teachers and the interplay between principals and children and classroom teachers.
> The boss's philosophy is very much like our own and this is a great freedom we have been allowed. It's not only been the expectations of the kids - we're also realising ourselves, our own expectations which have been curtailed and hampered in the past in traditional schools, but now we have the opportunity to free ourselves and to put things into action which we believe in very strongly and the boss has been right behind us.

A teaching principal had this to say:

> The leadership role of the principal is a very, very important one, not that it is any more important in an open school than it is in a linear school. But I think that the principal should be the sort of character who gets on well with people; he must like people, he must be friendly with people and he

> must not have the attitude - 'well I am the boss around here : you people are going to do as you are told' - and before any change that he wants to make, should consult with his staff because after all he is only a leader and the strength of the whole body is only the strength of the head.
> He requires the full co-operation of his staff and I think that he has to be prepared to take more than he gives at times. There are going to be many occasions when some of those ideas that he has used in the past do not function successfully in this school and he has to be big enough to see this; he has got to be big enough to take the advice of his other teachers, even though they might be relatively young, and together they need to work out a school policy.

There are teachers in open space schools who seem to know what sort of leader they want. He should not be a person who barricades himself in his office, to remain a distant authority figure feeling secure and safe in the school's social system. He is in fact a participant in school affairs, a person obviously concerned with children and teaching, who with his teachers is able to chart a course, and exuding a confidence which shows that he knows the path they are following.

To some degree, the operation of co-operative teaching groups represents a diminution of the responsibility and apparent authority of the principal. A group of teachers is a more cogent proponent of an educational policy than a single teacher. Co-operative groups could represent threats to the traditional authority vested in the principal. This situation could easily provoke a reaction and imposition of an idea with potentially destructive consequences for morale. Instead, principals must be prepared to exercise a less obtrusive decision-making role where leads come from teachers. On the other hand, teachers have traditionally looked to principals for advice and direction. Many expect them to know the answers. The onus is upon them to be at least aware of the open space phenomenon and to have considered its consequences.

One should consider Silberman's (1970) observation that certain headmasters will find many administrative chores to perform to justify their view of themselves as administrators.

Perhaps Rogers (1969, p.212) summarises the ideal role that the principal should adopt in an open area school.

> He can operate in a way which involves his staff as participants, who draws upon their knowledge and abilities, which relies upon the basic human trend toward learning and self-fulfilment. To do so is not easy, and the extent to which it can be achieved depends primarily upon the attitude of the administrator. Yet it is worth the risk, since only in this way can the exciting potential of the group be utilized to carry the organization - and its constituent members forward.

If the principal can adapt his role then the innovation has at least a chance to get off the ground. For him to adopt an autocratic leadership role without staff consensus is liable to lead to disaster. This warning is vividly spelled out in Smith and Keith's (1971) documentation of the development and final administrative disintegration of an American innovative open area school. At least one key factor leading to the failure of what at first appeared such a grand idea was the inability of the principal to either perceive or else check his impulse to direct what happened in almost every key area in the operation of the school. Hence, autocratic or non-participative leadership, whether it be in a traditional or open school, is liable to inhibit the development of the open area school concept. Too often the gerunds 'leading' and 'directing' are confused and used synonymously. Eriksen and Messina (1972) have also pointed out the need for the delegation of authority to staff members. It is imperative that all staff members assume responsibility for the program. In an education system in which mobility of teachers is a fact of life the vesting of responsibility and initiative in the hands of a single figure makes the innovation a vulnerable venture.

TRAINING TEACHERS FOR OPEN SPACE SCHOOLS

Articulation of the Rationale

The prototype of the open space school was first built in Western Australia in 1968. By the beginning of 1974 nearly 23 per cent of primary school aged children were housed in open space school environments. Information such as this is relatively easily compiled. However, exactly determining the source of open education teaching practices, and the number of children exposed to these types of learning environments would be a hazardous process. In varying facets and in varying degrees Australian teachers have been adopting open relationships with children since formal education began. It has become almost trite to observe that open space learning environments need not support open learning arrangements of the type outlined by writers such as Kohl (1970), Barth (1971), or Featherstone (1971), and its other proponents who have written so persuasively about open education with only limited reference to the design of buildings.

Yet, when radical changes are made to contemporary school design presumably they occur in the light of a well developed educational and architectural rationale. If open space design and open education are not necessarily one and the same phenomenon then one might argue, surely there exists an obligation to spell out an educational rationale for teachers assigned to open space schools. For a number of reasons this has not happened in Western Australia.

In the first instance, open space schools, though modified for Australian conditions and embodying the ideas of local architects, were essentially adopted from models in the United Kingdom. A British firm of architects was associated with the first developments. The

prototype design did not evolve, step by step, from the demands of local teachers. Hence, while particular Western Australian primary teachers were attempting innovatory teaching practices the new school models were not an explicit response to any special teaching expression or practice.

In the second instance, in the United Kingdom it would be fair to say that the new primary schools were the architectural expression for a broadly based informal teaching approach that had very much a grass roots origin. It has been a difficult assignment to analyse these approaches into a body of identifiable teaching and learning processes logically associated with the open space concept. Thus to a degree there has not been available a pool of teacher experts able to articulate the foundations of the innovation.

A third reason is implicit in the architectural perspective of the function of the open school building. Probably the most prolific adjective used in the literature to describe the function is the term 'flexible'. The metaphor of the classroom as a piece of matter with physical properties of flexibility, or malleability has been persistently used. In Western Australia the architectural brief appears to emphasise that the new schools should not be attuned to any one approach to organising children for learning. Hence, provision is still made for learning spaces which enable the cellular organisation of groups of children into groups of forty or less. Hence, while progressive teaching practices may have been tacitly encouraged, there was a definite awareness of the danger of burning one's bridges.

Finally, the administration has been conscious of the emerging spirit of professionalism and its consequent need for a degree of administrative independence among primary school headmasters. This attitude further explains the reluctance of authorities to prescribe a mandatory teaching approach.

These four influences have fairly well assured that a variety of teaching practices of both a traditional and a progressive nature operate in the various open space schools. Even so, teachers have developed expectations of what is required in the new schools.

Expectations of Teachers

Interviewees were asked: Is something different expected of you, in terms of the way you teach, in this school? A sample of responses is detailed below.

> Yes, it is to be a member of a co-operative teaching staff. As a member of this staff I teach Grades 1, 2 and 3 instead of Grade 1 and during the afternoon I take Grades 2 and 3 for sport. During that time while I am taking them for sport and physical education on the oval and on the lawns surrounding the school, the rest of the team is taking my class for music, singing, art, drama, oral expression, rhythm, science and all the radio and television programmes.
>
> Another way in which the expectations are very different is the timetabling. I only timetable for the skill subjects and printing, and my own special subject, which is physical education. I don't have to timetable for oral expression, music, singing, drama, science and all the rest of the happy subjects which we have in the afternoons.

> Yes something different is expected. We're expected to team teach and to fit in with the other teachers in our area and in the whole school to a far greater degree than we've ever been expected before, especially being at this very low level in Grade 1.

> We were expected to change an awful lot really. We have only been in it about four months. First of all the teachers had to change completely. We are supposed to keep our doors open all the time, and we can't teach our old methods in this situation. When we used to use a lot of drilling and a lot of drama, I used to rely on a lot of charts around the room and children looking everywhere to see things. I had different sections of the room devoted to different subjects, but now we can't because there is just no pin up. We can't

> do a lot of incidental noisy work because we are worried about the teacher next to us. Still I suppose it takes some getting used to.
>
> In this school I think that I am required to be a member of a team much more than in a conventional school. I have less opportunity of being an individual, and being a member of a team I've got to very seriously consider the wishes of the other teachers teaching adjacent to me.
>
> Yes, I feel that something different is definitely expected, but nobody has ever told me exactly what. The Head has made me feel he is sitting back waiting for something great to happen, and yet as I was new to the situation I didn't have any idea of how to go about it. When the Superintendent came, he drew a comparison between the junior cluster, which he felt was running very well, and the senior cluster, which I am in, and which obviously wasn't measuring up. But nobody had ever sort of said, 'this is what you should be doing', or made any suggestions. It was sort of left to us, which was good in a way, but as it happened the three of us here knew nothing about what we should be doing.

A predominance of opinion suggested that even though definite guidelines were not laid down, teachers at least were expected to do *something different* from their colleagues in conventional schools, and the essence of this difference could be found in the gamut of practices that characterise co-operative teaching. This trend is not surprising. The physical differences - for instance the direct surveillance of colleagues and the inability to conduct a conventional lesson without orally impinging upon adjacent colleagues - make it difficult for a teacher in an open space classroom to conduct her teaching in a conventional manner. One suspects that it is not only the teachers who resist change, but also those who try to work with such teachers. They become dissatisfied with architectural arrangements that enforce greater reliance on colleagues.

The dilemma of not spelling out requirements of teachers and of not providing specific training, raised in the comment above, must

account for a degree of unease felt by some teachers in the open space school. Not enough is known about the psychology of innovative and non-innovative teachers. However experience suggests that there are teachers who require the security of a clearly defined and well understood teaching role. For these persons the most comfortable role must surely be that which they first observed as students and then adopted as teachers in conventional schools. Unfortunately, the open space school is not the most appropriate environment in which to adopt a traditional role.

It does not make good sense, if the building style does make a difference in the way teachers conduct lessons, or if there is an educational philosophy or theory behind the design, to ignore the differences between open and conventional school designs during the pre-service training and professional development of teachers.

Teacher Development

For those teachers currently in the field, and those about to enter the profession, how should they be prepared to cope with teaching in an open area school? Some suggestions offered were:

> Well first, we should have a few experienced teachers from open planned schools, and I mean after two or three years in an open planned school, who went into college and gave some lectures on basic things. For instance, a teacher must realise that she is one of a team, she must forget the blackboard and chalk idea, she must be involved with her children, she must move around from group to group and teach from table to table and so on.

> I would actually like to visit an open area school and see it in operation, in the previous school year before I took up an appointment, in a school. I would like to go for a whole week and teach in a school or be free to wander in and out and meet situations as they occurred there.

> First of all, I think student teachers should know their appointment twelve months before leaving college and spend that last twelve months practising in open area schools so that they have some familiarity when they are posted to an open area school.
>
> I think that teachers coming into this type of school need as a pre-requisite a very wide working range of child centred activities such as laboratories - how to use them how to get them working quickly and how to move amongst the children, guiding and steering wherever they are needed.
>
> I certainly think that some sort of in-service would be necessary. Firstly the theory behind teaching in these schools would need to be explained to you, especially to a young teacher. And secondly, there are a lot of practical things which would need to be explained, such as the need to co-operate and communicate with the teachers adjacent to you, programming for use of the art areas and soundproof room. It would need to be made clear to every person that he or she could no longer be an individual teaching in just whatever way he wanted when he was appointed to this school.
>
> It would be a good idea for staff including the headmasters and deputy headmasters to perhaps spend one week free from their own classroom in which they would attend say a different cluster school every day and observe. I think by seeing about five different cluster schools in rapid fire it would cause the teacher being appointed to this situation to realise they are really going to open up their mind and that their own ideas are going to be very important. Whether they are just a normal staff member, or whether they are a deputy headmaster, mistress or headmaster, I think it is essential that they see what they are coming in to and how varied it can be.

There were common themes in the responses of most interviewees to the requirements of in-service and pre-service training for teachers in open space schools. These were, particularly, the need to provide teachers with special technical skills and the need to allow teachers, prior to their first appointment to an open space school, to immerse themselves in a properly functioning school for a substantial period of time.

Training that consists mainly of telling teachers how to work in an open space school is completely antithetical to principal notions of open education. Teachers will learn best if they are able to engage in open classroom processes during training. The 'learning by doing' approach has an equal applicability for teachers as for children.

How can a competent in-service programme be mounted for teachers in open space schools? Traditional models of bringing groups of teachers to a central location and presenting lectures on theoretical and practical aspects are likely to have only limited success. It would be cheaper and more convenient to distribute printed materials containing the appropriate knowledge. Furthermore, such a step would avoid reinforcing the traditional group-lecture process, the antithesis of open educational practice.

Attempts to meet these requests by Western Australian teachers are being currently realised by on-site in-service training of teachers. Groups of teachers from conventional schools are being given the opportunity to visit open space schools and to discuss problems and approaches with colleagues and other experts over one and two day periods. However this approach is difficult to operate successfully for a number of reasons. In the first place, unless instruction is on-going under normal conditions, what is seen has a patent artificiality that can be unconvincing. It is difficult to conduct lessons with a large number of adults looking on inquisitively. To dismiss classes and merely conduct seminars in the building, while of some value, misses the point. It is how the building is utilised by teachers that counts. The in-service programme, ideally, should allow some simulation of the processes expected of teachers in open space schools.

Then there is the problem of the relatively short length of the course. There is little question that even a single day can be of immense value to obtain a feeling of what the open school is about.

However, to acquire the pre-requisite skills for working in an open school may need a much longer immersion in the open school. To be most satisfactory the experience should include sessions of actually participating in instruction in the school.

There is a third problem; shortage of expertise. With any true innovation persons accomplished in the necessary skills to expedite the new ideas will be in short supply. To mount on-site pre-service and in-service courses requires a body of skilful and convincing practitioners. It will take time for these people to come to the fore. This is one reason why training courses have been so slow to get off the ground.

One advantage of the open space schools is that it does more readily make possible on-going training among staff. In the conventional primary school, the teachers tend to be isolated in their own self-contained classrooms and generally do not see or hear their colleagues at work. As Cohen (1973) points out, there are few opportunities for teachers to earn professional respect from other teachers on the basis of their obvious skill in teaching or skill in planning and evaluation. The net effect of this isolation is two-fold: In the first place it inhibits the incidental acquisition of teaching skills and lessens the opportunity for teachers to have an impact upon anyone but their own group of students; in the second place, the isolation was likely to frustrate ambitious teachers by removing sources of responsibility and influence that are available to teachers in open space environments.

The following excerpt illustrates this potential avenue of payoff. A teacher refers to the benefit of the largely fortuitious location of his teaching station adjacent to that of a very successful science teacher.

> The only thing I've learnt in this situation is that in team-teaching I have next door to me a terrific science teacher and he has taught me how to teach science. This is the major experience I've had in this open type cluster school.

The increase in professional interaction among teachers in co-operative groups may lead to a consequent gain in professional attitude that is reflected in activities that occur out of school time. Several interviewees spoke of their involvement in planning instruction with team members during the evenings or over the weekend at home. It is not meant to imply that teachers well disposed towards open space schools are any more responsible or warm in their relations with children; rather, their feelings of collective responsibility are likely to promote a greater interchange of educational ideas.

CONCLUSION

Consideration of the interviews with 27 teachers has lead to the conclusion that open space classrooms are not an appropriate environment for all teachers. There are teachers fully competent in a self-contained classroom situation who are unable to realise their teaching goals in the open space school. In particular, the mobility of children between teachers and the mismatch of professional expectations with their colleagues lead to considerable tension. Continual service in open space schools seems unlikely to ameliorate the conditions of many of these teachers in spite of the fact that numbers of their colleagues have found that their early misgivings about open space schools have been unfounded.

This report is not able to comment accurately upon the incidence of these teachers in the profession. Based upon occasional comment with other teachers and upon the initial survey to locate the interview sample of teachers decidedly dissatisfied with their experience in open space schools, it would appear that they constitute a small proportion of the teaching force.

On the other hand, it would seem that for the majority of teachers open space schools do offer opportunities for new teaching strategies; and for numbers of teachers these opportunities are being realised.

The question arises whether pre-service and in-service training courses ought to be aimed at converting the total teaching force or whether they can afford to be or ought to be discriminating among their clientele. In the past, training agencies have tended to be mild-mannered proselytisers rather than educational pluralists. This report suggests that the uncertainty and even antipathy felt by some teachers towards open space schools is based upon well entrenched attitude

structures and value orientations. Its deep-rootedness suggests that it is not amenable to change through short term, non-participative training.

The question must then arise; if the value orientations of these teachers are unlikely to be changed, and if regardless of the fact that they have resisted a particular educational innovation, the teachers are competent professional people, how should the system react to them? At least it must respect their professional integrity. It is difficult not to conclude that there exists a wide clientele of children and parents for whom the teaching styles of these teachers present a satisfying alternative to that offered in open space schools.

The open space teaching environment requires substantial adjustment on the part of teachers whose previous schooling and teaching experiences took place in self-contained classrooms. Open space schools make demands even on teachers who attempt to maintain traditional teaching practices without any real concession to the changed physical environment. Though in many cases teachers may close themselves off from their colleagues by utilising moveable partitions, this act of withdrawal has an impact upon the organisation of the school and can lead to tensions among colleagues. For the particular teacher it can be an expression of low morale; it is the last resort after a series of attempts to come to terms with the open classroom. The attempts are made in the first place because teachers feel they are somehow expected to change in the new environment.

For teachers disposed towards teaching in open schools special skills require development. In the first place, successful co-operative teaching strategies require a high degree of inter-personal skill from the group or team members. Sensitivity to the situation of colleagues located in adjacent teaching bays is a primary requisite for the venture to succeed. Leader and follower skills are necessary if there is to be a balance of interests and ambitions.

In addition, teachers require special skills to assist them to assume a differently accented role - that of facilitator rather than director-cum-producer-cum-star of every learning experience offered to children under her charge. There seems little reason to doubt that open teaching in an open space situation is more demanding than directing the operations from the front of a classroom of all children in unison and requires a considerable reorientation on the part of teachers. It would be very easy for a teacher to abdicate her responsibility as an educator in the open classroom by simply keeping children busy. Orchestrating small groups of children in such a way that they are able to acquire such social competency skills and yet not allow a deterioration of basic communication and computational skills would seem to be an important success factor.

Hence, until teachers are equipped to take advantage of the physical environment, the positive gains that may accrue from the open space school are likely to be marginal. It seems sensible for teachers to be familiarised with a rationale of the open space school prior to appointment and be acquainted with the necessary skills that the school demands. The most successful programmes may be those that involve teachers in learning situations that approximate those that they might expect to find in the open space school. From this point of view the lecture hall is the least appropriate venue, the open space school empty of children a possible compromise, and a fully operating open space school the ideal in-service environment.

One component that is often forgotten in the evaluation of open space schools is the quality of the leadership. It is easy to prescribe an ideal; not too directive, fair, open to new ideas, and so on. These are probably leadership traits required in any situation. Yet consideration of the functioning of the open space school does suggest the need for some modification to the leadership role as commonly exercised in the conventional primary school. Sensitivity towards the

quality of interpersonal relationships among staff members is one crucial facet. Exhibiting a willingness to allow teams of teachers to conduct their own classroom teaching arrangements is another. A third is that the principal must be able to provide expertise and direction at the invitation of the teachers.

Open space school buildings do not necessarily represent an irreversible educational push forward. Architects and builders can always find ways of partitioning space with permanent divisions and re-create the self-contained school, albeit, a school looking superficially different from its eggcrate predecessor. Should this happen, the pity of it would be that the real *educational* innovation, a changed approach to the instruction of children, would not have had a reasonable opportunity to prove itself. For any school to function at its peak, it must have at least three factors operating in its favour: it must have a rationale and purpose that is clear to all its staff members; it must have a staff consistent in its appreciation and endorsement of the rationale; and it must have a staff equipped as fully as possible with the pedagogical skills that are required to operationalise the rationale. The glamour of the new open space building must not be allowed to distract attention from the character of the instruction that it houses.

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APPENDIX 1

SUMMARY DESCRIPTION OF INTERVIEWEES

DISSATISFIED (16)

1.	SEX:	Male	: 3	Female	:	13
2.	MARITAL STATUS:	Single	: 3	Married	:	13
3.	AGE:	20-24	: 3			
		25-29	: 2			
		30-34	: 4			
		35-39	: 2			
		40-50	: 3			
		50 +	: 2			
4.	POSITION:	H.M.	: 2			
		D.H.M.	: -			
		F.M.	: 4			
		Ma	: 2			
		Mi	: 8			
5.	GRADES TAUGHT:	1	: 3	1/2	:	1
		2	: 4	3/4	:	1
		6	: 2	4/5	:	1
		7	: 1	5/6	:	1
		Nil	: 1	6/7	:	1
6.	TENURE:	Permanent	: 11	Temporary	:	5
7.	NUMBER OF YEARS AT PRESENT SCHOOL:			0-2	:	14
				3-5	:	2
				5 +	:	-
8.	NUMBER OF YEARS EXPERIENCE IN OPEN AREA SCHOOL (O.A.S.)			0-2	:	14
				3-5	:	2
				5 +	:	-
9.	NUMBER OF YEARS EX COLLEGE:			1-4	:	5
				5-9	:	1
				10-14	:	5
				15-19	:	2
				20 +	:	3
10.	BREAKS IN SERVICE - NUMBER OF YEARS SINCE RESUMPTION OF TEACHING			Nil	:	9
				1-4	:	3
				5-9	:	2
				10-14	:	1
				15-19	:	1
				20 +	:	-

11.	ABSENTEEISM IN O.A.S. (IN DAYS):	0-4	: 12
		5-9	: 4
		10-14	: -
12.	YEARS SCHOOL OPEN :	1 year	: 4
		2 years	: 3
		3 years	: 3
		4 years	: 6
		5 years	: -
13.	NUMBER OF HEADS IN O.A.S. SINCE OPENING:	1	: 7
		2	: 7
		3	: 2
		4	: -
		5	: -
14.	KNOWN LENGTH OF STAY OF HEADS IN O.A.S.:	1 year	: 7
		2 years	: 8
		3 years	: 1
		4 years	: -
		5 years	: -
15.	MODEL OF O.A.S.:	1968	: -
		1969	: 2
		1970	: 3
		1970 (M)	: 6
		1972	: 4
		Private	: 1
16.	NUMBER OF SCHOOLS IN O.A.S. SURVEY NUMBER OF INTERVIEWS:	School 1	: 1
		School 2	: 3
		School 3	: 1
		School 4	: 2
		School 5	: 1
		School 6	: 1
		School 7	: 2
		School 8	: 3
		School 9	: 1
		School 10	: 1
17.	APPLYING FOR TRANSFER FROM O.A.S. BECAUSE OF INCOMPATIBILITY:	(1) Mi	20-24 Gd. 2
		(2) F.M. 1970 (M)	30-34 Gd.5/6
		(3) F.M. 1972	30-34 Gd.1/2
		(4) Mi. 1969	30-34 Gd.3/4

SATISFIED (11)

1.	SEX:	Male	:	6	Female	:	5
2.	MARITAL STATUS:	Single	:	3	Married	:	8
3.	AGE:	20-24	:	2			
		25-29	:	3			
		30-34	:	1			
		35-39	:	1			
		40-50	:	2			
		50 +	:	2			
4.	POSITION:	H.M.	:	1			
		D.H.M.	:	1			
		F.M.	:	1			
		Ma	:	4			
		Mi	:	4			
5.	GRADES TAUGHT:	1	:	2	1/2	:	-
		2	:	1	2/3	:	2
		3	:	-	3/4	:	-
		4	:	-	4/5	:	1
		5	:	1	5/6	:	1
		6	:	-	6/7	:	2
		7	:	1			
6.	TENURE:	Permanent	:	10	Temporary	:	1
7.	NUMBER OF YEARS AT PRESENT SCHOOL:				0-2	:	6
					3-5	:	3
					5 +	:	2
8.	NUMBER OF YEARS EXPERIENCE IN AN O.A.S.:				0-2	:	8
					3-5	:	3
					5 +	:	-
9.	NUMBER OF YEARS EX COLLEGE:				1-4	:	2
					5-9	:	3
					10-14	:	2
					15-19	:	2
					20 +	:	2
10.	BROKEN SERVICE -				Nil	:	7
	NUMBER OF YEARS SINCE RESUMPTION OF TEACHING:				1-4	:	2
					5-9	:	1
					10-14	:	-
					15-19	:	-
					20 +	:	1

11. ABSENTEEISM SINCE WORKING IN AN O.A.S. (IN DAYS):

0-4	7
5-9	3
10-14	1
15-19	-
20 +	

12. YEARS SCHOOL OPEN :

1 year	1
2 years	7
3 years	-
4 years	1
5 years	2

13. NUMBER OF HEADS IN O.A.S. SINCE OPENING:

1	6
2	1
3	4
4	-
5	-

14. KNOWN LENGTH OF STAY OF HEADS IN O.A.S.:

1 year	4
2 years	5
3 years	1
4 years	-
5 years	-

15. MODEL OF SCHOOL:

1968	2
1969	2
1970	-
1970 (M)	5
1972	2
Private	-

16. NUMBER OF SCHOOLS IN O.A.S. SURVEY
NUMBER OF INTERVIEWS :

School 1	2
School 2	1
School 3	2
School 4	2
School 5	1
School 6	1
School 7	2
School 8	-
School 9	-
School 10	-

APPENDIX 2

INTERVIEW PROCEDURES

1.0 Selection of Teachers for Interview

1.1 List of Open-Unit Schools

The Planning Branch of the Education Department had prepared a list of open-unit schools built in Western Australia since 1968. There were 94 schools listed. This document was used to identify open-unit schools in the Western Australian Education Department's 1973 Publication, *Schools and Staffing*.

1.2 Approach Through Principals

The principal of each of these 94 schools was telephoned. After explanation of the Project, the principal was asked to identify a satisfied or dissatisfied teacher on his staff; preferably one who was articulate, sympathetic to research programmes, and one who was willing to submit to a taped interview which could last from 30 minutes to 210 minutes. Subsequent to these conversations, lists of satisfied and dissatisfied teachers were compiled. These lists included the name of principals as well as teachers.

1.3 Approach to Teachers

Each of the identified teachers was then approached by telephone; the research programme was outlined, and the invitation to participate was extended. A short list with appointment dates was drawn up to suit the convenience of the principal as well as the teacher; for the simple reason that in many instances the principal took charge of the vacated classroom to allow the teacher the peace of mind that follows in her knowledge that her class was being looked after.

2.0 Preparation of Interview Schedule

2.1 Decision to Interview

It was felt that two methods of testing teachers' reactions were feasible; one a questionnaire, the other an interview. It was decided to adopt the interview technique so that teachers' reactions could be investigated in depth. The structured format of the questionnaire was considered to be a strength worth incorporating in the interview schedule. Subsequently a structured interview schedule was devised.

2.2 The Interview Schedule

Seven areas of interest were identified after several discussion sessions at the Branch. These were considered the fruitful areas of research into teacher reaction :

(i) Expectations.

(ii) Thoughts on open education.

(iii) Satisfactions and dissatisfactions.

(iv) Training and preparation.

(v) Outcomes.

(vi) Changes in architecture.

(vii) Relevant information.

2.3 Trial Run

The interview was conducted with two teachers, as trial runs. Modifications and rearrangements were made to the schedule to improve its appeal to teachers.

2.4 Anonymity

Each interviewee was assured of the anonymity of the content and source of the interview, immediately prior to the interview taking place. At the conclusion of the interview teachers were invited to contact the interviewer should they wish to withdraw, alter or add to any of their comments. This personally delivered guarantee to the teacher, acted as a catalyst to articulation and helped establish rapport so much more easily.

3.0 Hardware Used in the Interviews

3.1 Dictaphone

The dictaphone used was a Philips model no. EL3581-32; a reel to reel operation. This dictaphone had an odometer which was set at "0.0.0" prior to each interview. This had a two-fold purpose :

(a) footage numerals displayed on the odometer were transposed to the interview sheet, so that immediate recall was effected when the interviewee requested a replay of her response to a question. This facilitated a re-recording of each answer when requested; and,

(b) footage display acted as a reminder to change tapes if the interview was a lengthy one. The shortest interview took approximately 30 minutes, and only one side of one tape i.e. 20 minutes was used. The longest interview lasted 210 minutes, and this used approximately 3 sides of tape which accounted for one hour of recording and approximately 12 foolscap pages of typescript.

4.0 The Interview

4.1 Location

The interview was conducted in a quiet room, with a handy power point, two chairs and a table. Interviewer and interviewee sat side by side facing in the same direction. This allowed the easy placement of the microphone in front of the mouths of both participants. Care was taken to arrange the time of interview to avoid recesses, luncheon and other noisy periods such as physical education or manual arts conducted in adjoining facilities.

4.2 Initial Approach

The importance of the interview in the overall research project was outlined. Anonymity was guaranteed from the school principal and head office administrators. A conversational atmosphere was encouraged and this was motivated and sustained until such time as the interviewer was visibly assured that the subject was relaxed, confident, co-operative and articulate. Most fears centring around the tape-recorder were erased by the explanation that typescripting would follow the interview, and that truthful and unbiased reporting would be more likely to be achieved in

this way than with reliance on the interviewer's memory, highlighted incidents and anecdotal rewriting.

4.3 Techniques

A trial question was asked and the subject's response recorded. Technicalities such as speed of speaking, direction of voice, replaying on the fast wind-back on the microphone to listen in to replies, and erasures were explained. Visibility of the reels moving was a signal that recording was taking place. The trial question was erased.

The technique employed with each question was described. The question was taped and the recording stopped. Discussion would follow to focus thought and relativity on the response. When the respondent was confident of her reply, the question was replayed, and the interviewee's response was recorded. The response was replayed whenever requested by the interviewee. This provided an occasion for the interviewer to bolster the confidence of the subject when needed, to re-record, add to or delete as requested, before proceeding to the next question.

4.4 Finishing the Interview

The interview was always finished in the one session even if it ran overtime, or stopped for interruptions. The interviewer thanked the subject for co-operating and offered to play back the entire interview; mercifully, this was not requested once! Anonymity was again assured. The principal was thanked for his co-operation in identifying the subject but details of the subject's responses were never discussed with him.

One subject requested a copy of the typescript and this was supplied.

5.0 Analysis of Data

5.1 Typescripting, etc.

Typescripting proved to be a tiring and tedious chore performed by a number of typists. Sharing of the typescripting overcame the problem of tedium but not syntax. Careful editing was necessary.

5.2 Content Analysis

A content analysis of each typescript was then undertaken to facilitate the ready reference to quotable quotes as and when required in the descriptive stage of the Project.

APPENDIX 3

INTERVIEW SCHEDULE FOR TEACHER REACTIONS

Content

1.0 Expectations

1.1 Is something different expected of you, in terms of the way you teach, in this school?

(If the answer to 1.1 is YES, proceed with 1.2 and 1.3)

1.2 How are these expectations different?

1.3 Whose expectations are they?

(If the answer to 1.1 is NO, ask 1.4 and 1.5)

1.4 Does this mean you are using traditional methods in your teaching in this school?

1.5 Why aren't you trying other techniques?

2.0 Thoughts on Open Education

2.1 'Open Education' is becoming a popular term these days. What does 'open education' mean to you?

2.2 From what sources have you gained these impressions?

2.3 This school is called an open area school. Do you think it is implementing what you've just described as open education?

2.4 Would you like to see this school more open or less open?

3.0 Satisfactions - Dissatisfactions

3.1 Which things have you liked most about teaching in this open area school?

3.2 Do you think you would have experienced these situations in a traditional school?

3.3 Which things have you disliked most about teaching in this open area school?

3.4 Do you think you would have experienced these situations in a traditional school?

4.0 Training and Preparations

4.1 What in-service training have you received regarding open-area schools, prior to appointment in this school?

4.2 What training would you see as desirable prior to an appointment to an open area school?

4.3 What steps have you taken to familiarise yourself with teaching conditions in an open area school?

5.0 Outcomes

5.1 Are you unhappy enough in your present situation to request a transfer out of this open area school?

(If answer is YES, ask reasons why and proceed to 5.2)

5.2 If no transfer was forthcoming, what could you do to improve your conditions here?

* When interviewing a very happy, satisfied teacher, this hypothetical question was often posed:-

Here is a hypothetical question:-

5.3 Supposing a member on your staff was desperately unhappy and unable to obtain a transfer, what would your advice be to such a teacher?

6.0 Changes in Architecture

6.1 If you could influence the design of future open area schools, what changes to the architecture of the building would you recommend?

6.2 What changes would you make to the architecture of a traditional type school to cater for open education techniques?

7.0 Relevant Information

7.1 Is there any other relevant information you would care to give us?

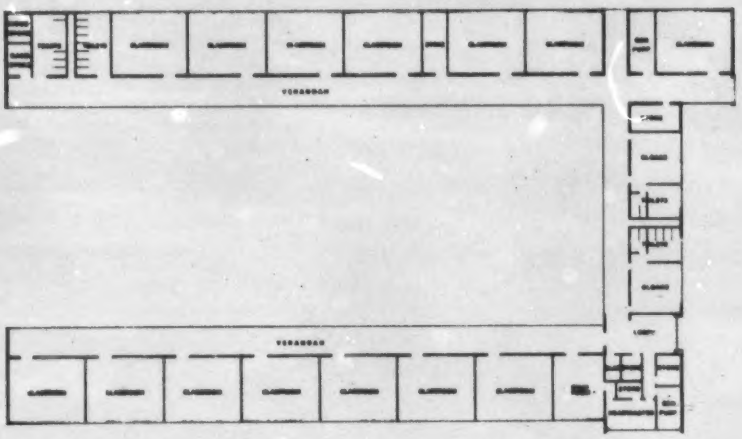
APPENDIX 4

PRIMARY SCHOOL DESIGN DEVELOPMENTS IN WESTERN AUSTRALIA TO 1972

As the following plans will indicate, there has been a gradual opening up of the interior of school buildings and the provision of specialised learning areas to facilitate less formal teaching practices.

The Pre 1968 Design

ELEVATION



FLOOR PLAN

Figure 1.

Basically built along the "finger plan" concept, this design was wasteful in terms of usable floor space, required a level site and was costly because it was constructed using substantial materials and labour.

The 1968 Design

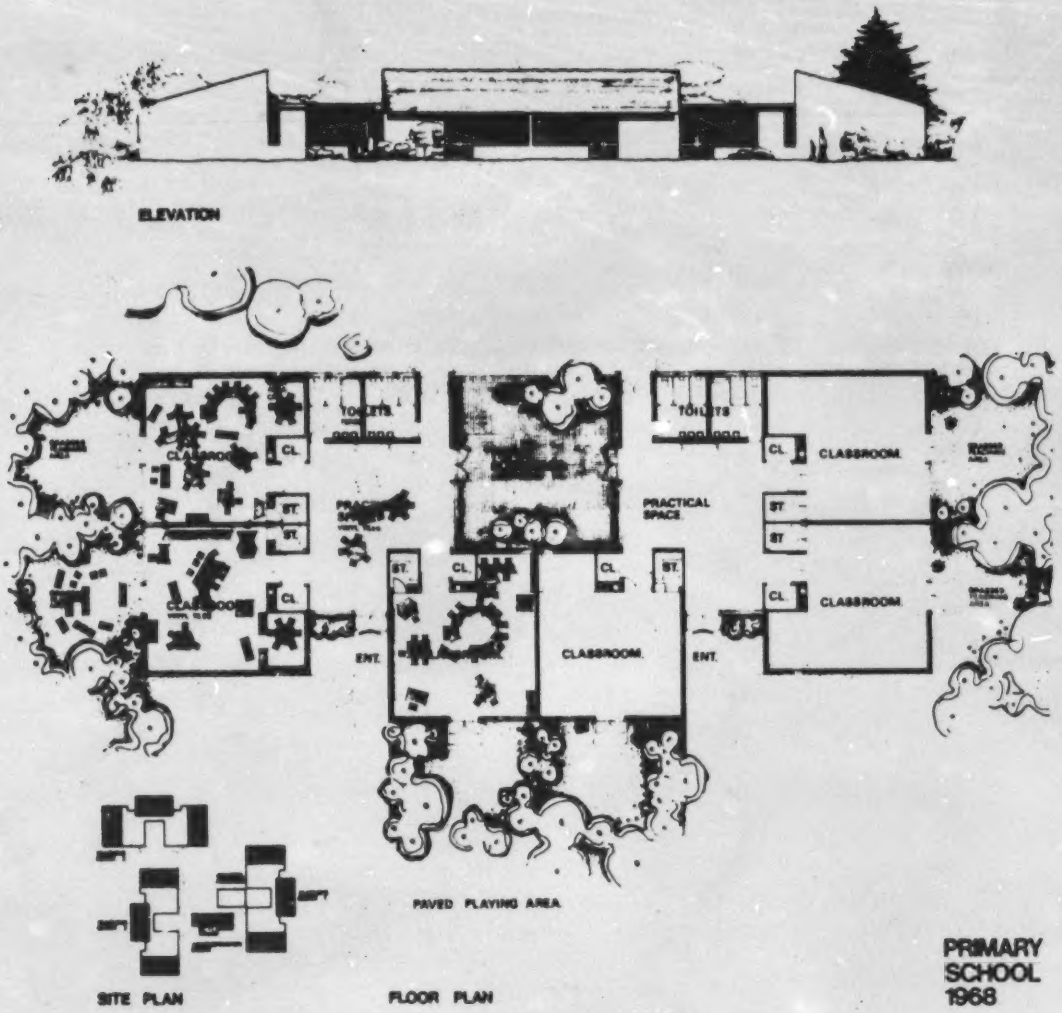


Figure 2.

By completely changing the school design, it was possible to introduce considerable building economies and to provide an educational environment more appropriate to the needs of modern educational trends. In brief, floor space was maximised, and specialised learning areas - the practical space, the paved courtyard, the quiet areas and direct access to external grassed areas - were introduced.

A modified form of this design had movable doors between two classrooms to facilitate co-operative teaching practices.

The 1969 Design

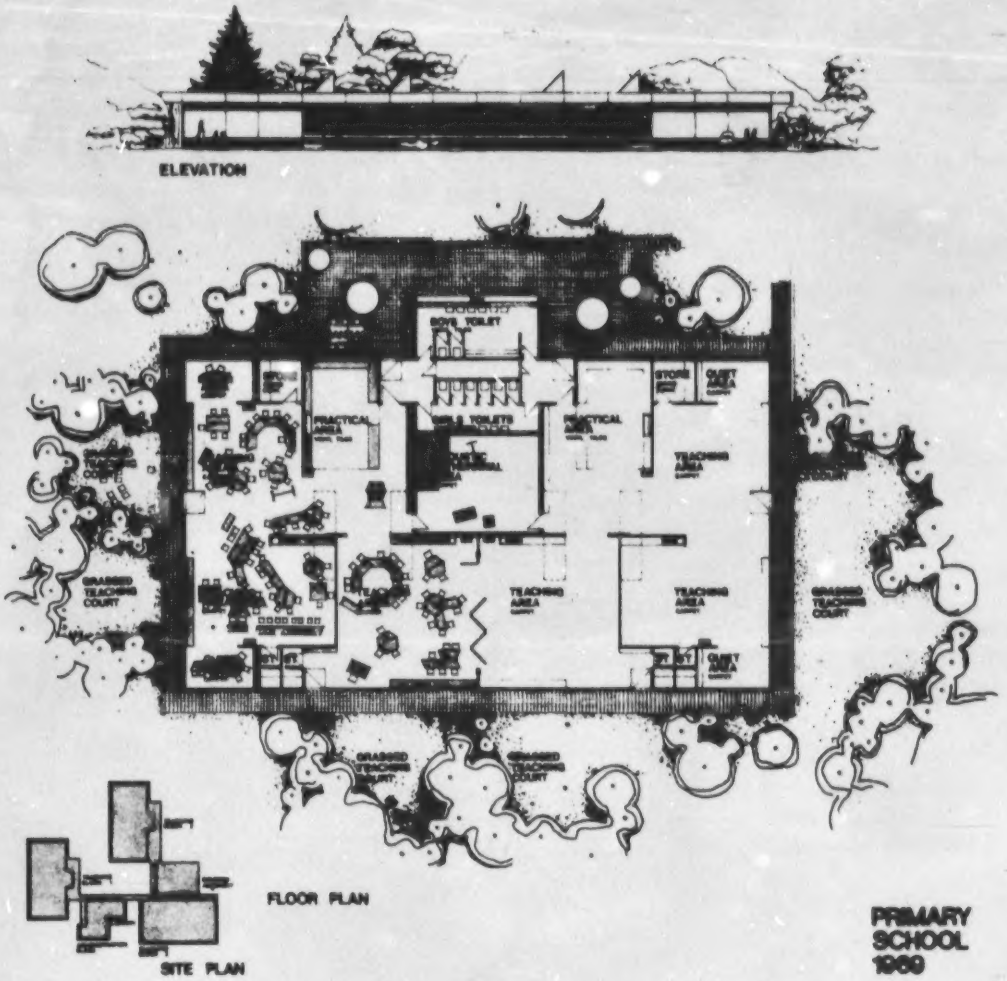


Figure 3.

This design was a more compact version of the previous style. In addition, carpeted floors and acoustic ceilings were provided to lessen noise; ceilings were lowered to eight feet throughout, and the withdrawal area was to cater for noisy or audio-visual activities.

The open doorway between adjoining areas were to provide for co-operative or team teaching practices.

The 1970 Design -

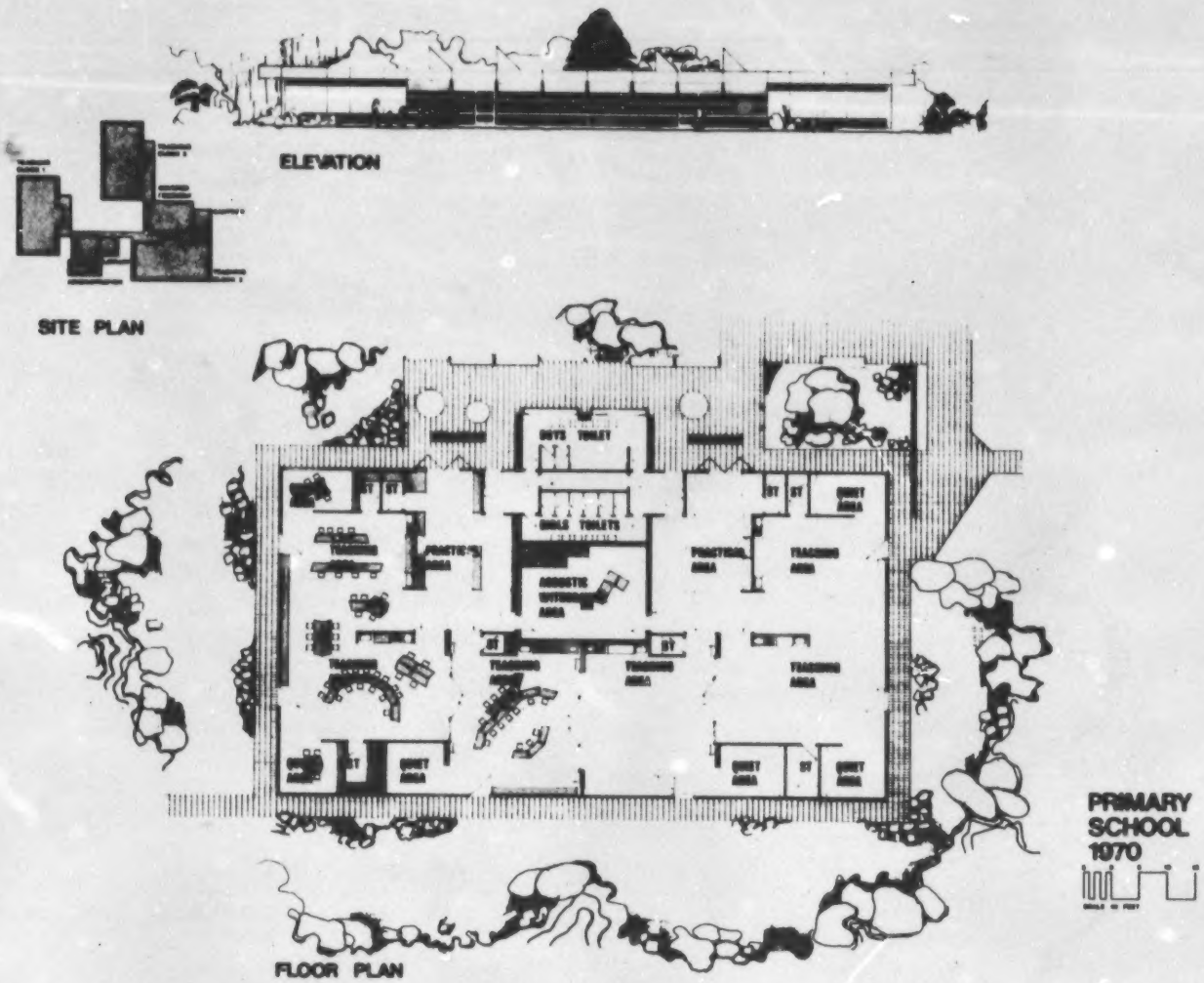


Figure 4.

The most significant change in this design was the removal of the internal walls so that the folding doors could be opened providing for unimpeded movement throughout the whole building.

The 1972 Design

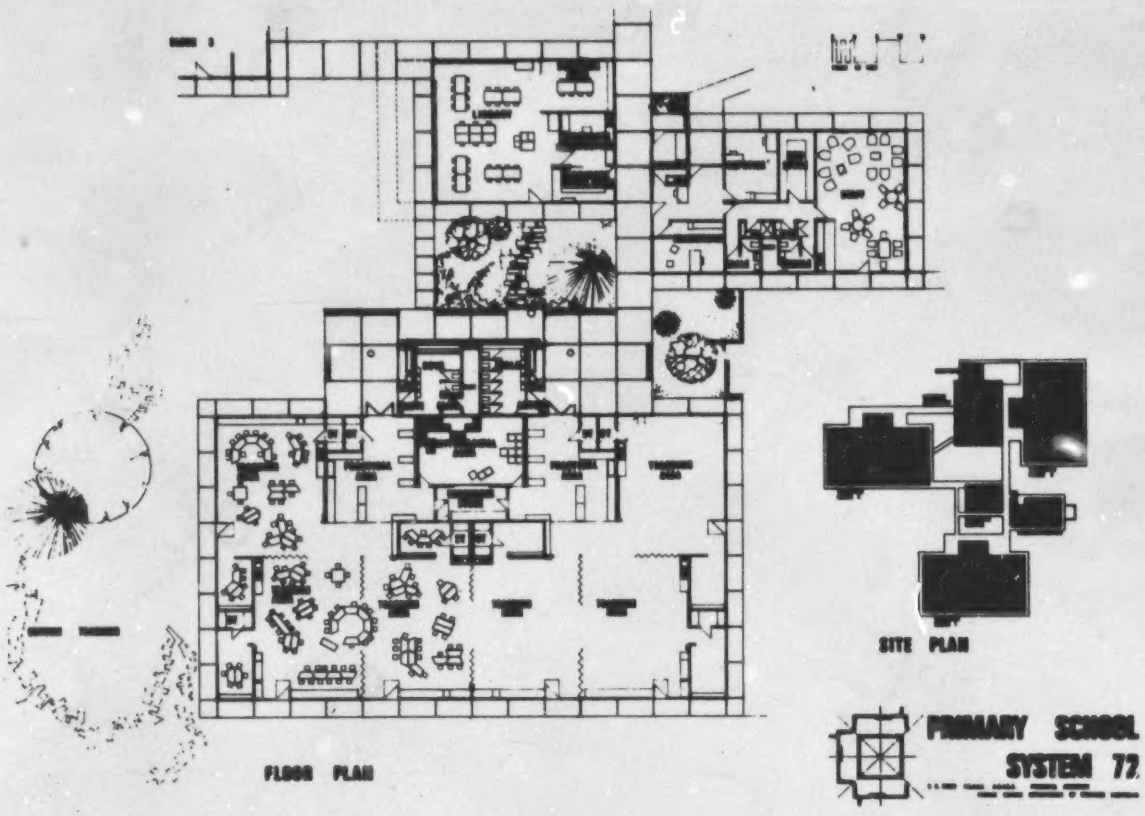


Figure 5.

The next phase in the development of open plan schools was achieved by the removal of most of the quiet areas and associated stores to the perimeter of the building and by providing concertina doors between teaching areas. In addition, toilets which were originally internal, were now completely external, and a resources store was placed adjacent to the withdrawal area.